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Energy Supply Technical Work Group

List of Priorities for Analysis

December 1, 2005

#	Policy Name	# From Policy Matrix Long List
	Renewable and Low-Emitting Energy	
1R	Environmental Portfolio Standard	1.1
2R	Public Benefit Charge Funds	1.2
3R	Direct Renewable Energy Support: including Tax Credits and Incentives, R&D, and siting/zoning	1.3
	Emissions Policies	
1E	GHG Cap and Trade	5.1
2E	Generation Performance Standards	5.2
3E	Carbon Intensity Target	5.3
4E	Voluntary Utility CO2 Targets and/or Trading	5.6
5E	CO2 Tax	5.7
	Grid and Utility Policies	
1G	Interconnection Rules for clean, distributed generation	6.1
2G	Remove Transmission and Other Barriers for Renewable and other Clean DG*	6.2
3G	Net Metering	6.3
4G	Pricing and metering strategies	6.4
5G	Remove Utility Rate Barriers	6.5
6G	Integrated Resource Planning	6.11
7G	Aligning utility rates with public interest	6.12

Draft Policy Option: Environmental Portfolio Standard

1. Policy Description:

   a. Lay description of proposed policy action:

   An environmental portfolio standard (EPS) is a requirement that utilities must supply a certain percentage of electricity from environmentally friendly sources. For example, an EPS of 5% would mean that for every 100 kWh that a utility supplies to end users, 5 kWh must be from environmentally friendly sources. An EPS differs from a Renewable Portfolio Standard (RPS) in that an EPS can include more options than renewables for meeting the requirement. For example, "negawatts" generated through verified energy efficiency projects can apply toward the EPS requirement. If a large industrial customer with a current demand of 35,000 MWh per year invests in energy efficiency that reduces demand by 20% or 7,000 MWh, and this investment and reduction are verified by an independent auditor, then the customer would have 7,000 MWh of clean energy credits to sell to a utility. Utilities can meet their requirements by purchasing or generating environmentally friendly electricity or by purchasing clean energy credits. By giving utilities the flexibility to purchase clean energy credits, a market in these credits will emerge that will provide an incentive to companies that are best able to generate clean energy, either through energy efficiency or renewables. Other options for meeting the requirement are possible depending on how the EPS is structured. For example, a provision can be included so that funding for research and development be applied toward meeting a utility's commitment.

   b. Policy Design Parameters:

      i. Implementation level(s) beyond BAU:

      1Ra: This option is the same as the ACC staff recommendation for changes to EPS (SRP continues with their proposed renewable investments):

      • 5% in 2015, 15% in 2025

      • Solar electric requirement down to 20% of EP resources

      • 25% of EP resources from distributed renewables

      • 10% of EPS should come from RFP for renewable generation in 2006 and 40% in 2010

      • Increase in Environmental Portfolio Surcharge caps

      1Rb: Western Resource Associates Proposal (SRP continues with their proposed renewable investments):

      • 1% in 2005, increasing 1% each year to 26% in 2025

- 8% of portfolio is Solar electric (2005 - 2012), then 10% in 2012 up to 20% in 2023
- retain extra credit multiplier
- allow out of state renewables

1Rc: Western Resource Associates Proposal with SRP meeting same requirement

ii. Timing of implementation:

See above.

iii. Implementing parties:

1Ra and **1Rb**: utilities regulated by the ACC.

1Rc: All Arizona utilities.

iv. Other

c. Implementation Mechanism(s): Indicate which mechanisms are to be used, and describe the specific approach that is proposed

i. Information and education

ii. Technical assistance

iii. Funding mechanisms and or incentives

iv. Voluntary and or negotiated agreements

v. Codes and standards

vi. Market based mechanisms

vii. Pilots and demos

viii. Research and development

ix. Reporting

x. Registry

xi. Other?

2. <u>BAU Policies/Programs, if applicable:</u>

a. Description of policy/program #1:

In the existing EPS, utilities (not including SRP) must generate a specified percentage of their total retail sales from renewable energy:

- Started in 2001 at 0.2% and increased annually to 1% in 2005 and will increase to 1.1% in 2007, expires 2012

- 2001 – 2003, 50% of Environmental Portfolio resources must be solar electric, remainder can be other environmentally friendly technologies including no more than 10% R&D
- 2004 – 2012, 60% of resources must be solar electric
- Environmental Portfolio Surcharge of $0.000875 per kWh with caps by customer class

b. Description of policy/program #2

c. Etc.

3. Types(s) of GHG Benefit(s):
   a. CO2: By creating a substantial market in renewable generation, an EPS can reduce fossil fuel use in power generation and thus reduce CO2 emissions
   b. CH4
   c. N2O
   d. HFC's, SFC's
   e. Black Carbon: To the extent that generation from coal and oil is displaced by renewables, black carbon emissions will decrease.

4. Types of Ancillary Benefits and or Costs, if applicable:
   a. Reductions in overall energy consumption and the shift from fossil fuel generation as a result of an EPS will lead to reductions in criteria air pollutants and, consequently, health costs associated with those pollutants.
   b. While much of the EPS requirement will come from low-cost renewables such as wind and biomass, meeting the requirement will lead to a moderate increase in direct costs to utilities implementing the EPS policy and a small increase in overall electricity system cost for Arizona. At the same time, though, investment in new technologies resulting from the EPS will spur economic development.
   c. Etc.

5. Estimated GHG Savings and Costs Per $MMTCO_2e$:
   a. Summary Table of:
      i. GHG potential in 2010, 2020
      ii. Net Cost per $MMTCO_2e$ in 2010, 2020
   b. Insert Excel Worksheet showing summary GHG reduction potential and net cost

6. Data Sources, Methods and Assumptions:
    a. Data Sources
    b. Quantification Methods
    c. Key Assumptions

7. Key Uncertainties if applicable:
    a. Benefits
    b. Costs

8. Description of Ancillary Benefits and Costs, if applicable:
    a. Description of issue #1
    b. Description issue #2
    c. Etc.

9. Description of Feasibility Issues, if applicable:
    a. Description of issue #1
    b. Description of issue #2
    c. Etc.

10. Status of Group Approval:
    a. Pending
    b. Completed

11. Level of Group Support:
    a. Unanimous Consent
    b. Supermajority
    c. Majority
    d. Minority

12. Barriers to consensus, if applicable (less than unanimous consent):
    a. Description of barrier #1
    b. Description of barrier #2
    c. Etc.